

What is claimed is:

1. An authoring apparatus, comprising:
a structure creating portion for encrypting a plurality of input contents with different keys and
5 creating a structure for recording the plurality of contents on a recording medium; and

a data output portion for grouping the plurality of keys with which the plurality of contents have been encrypted, encrypting the grouped keys,
10 creating the grouped encrypted keys, and outputting the plurality of contents in a recordable format to the recording medium in accordance with the structure created by the structure creating portion, the grouped encrypted keys being output by the data output portion.

15 2. The authoring apparatus as set forth in claim 1,

wherein the recording medium has two recording areas that are independently managed, and
wherein the authoring apparatus further
20 comprises:

recording means for recording the plurality of contents that are encrypted contents in one recording area of the recording medium and contents that are plain text in the other recording area thereof.

25 3. The authoring apparatus as set forth in claim 2,

wherein the plurality of contents that are encrypted content data recorded in the first recording area correspond to the contents that are plain content data recorded in the second recording area.

5 4. The authoring apparatus as set forth in claim
1,

 wherein the grouped encryption keys are created by correlating the keys and identifiers that identify the contents encrypted in accordance with to
10 keys.

5. The authoring apparatus as set forth in claim
4,

 wherein the grouped encrypted keys contain license information about the contents.

15 6. The authoring apparatus as set forth in claim
1,

 wherein the structure for recording the plurality of contents on the recording medium, the plurality of contents, and the plurality of keys with which the plurality of contents have been encrypted are recorded on a predetermined recording medium and the predetermined recording medium is supplied from the structure creating portion to the data output portion.
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7. An authoring method, comprising the steps of:
25 encrypting a plurality of input contents with different keys and creating a structure for recording the plurality of contents on a recording medium; and

grouping the plurality of keys with which the plurality of contents have been encrypted, encrypting the grouped keys, creating the grouped encrypted keys, and outputting the plurality of contents in a recordable format to the recording medium in accordance with the structure created at the structure creating step, the grouped encrypted keys being output at the data output step.

8. An authoring program for causing a computer to execute an authoring method, comprising the steps of:

encrypting a plurality of input contents with different keys and creating a structure for recording the plurality of contents on a recording medium; and

15 grouping the plurality of keys with which the plurality of contents have been encrypted, encrypting the grouped keys, creating the grouped encrypted keys, and outputting the plurality of contents in a recordable format to the recording medium in accordance with the structure created at the structure creating step, the grouped encrypted keys being output at the data output step.

20 9. A recording medium on which an authoring program has been recorded, the authoring program being configured to cause a computer to execute an authoring method, comprising the steps of:

25 inputting a plurality of contents, encrypting

the plurality of contents with different keys, and creating a structure for recording the plurality of contents on a recording medium; and

grouping the plurality of keys with which the plurality of contents have been encrypted, encrypting the grouped keys, creating the grouped encrypted keys, and outputting the plurality of contents in a recordable format to the recording medium in accordance with the structure created at the structure creating step, the grouped encrypted keys being output at the data output step.

10. An authoring apparatus, comprising:

a structure creating portion for creating a structure for recording a plurality of input contents on a recording medium; and

a data output portion for encrypting the plurality of contents with different keys, grouping the plurality of keys with which the plurality of contents have been encrypted, encrypting the grouped keys, creating the grouped encrypted keys, and outputting the grouped encrypted keys in a recordable format to the recording medium, the grouped encrypted keys being output by the data output portion.

20. An authoring method, comprising the steps of:

creating a structure for recording a plurality of input contents on a recording medium; and encrypting the plurality of contents with

different keys, grouping the plurality of keys with which the plurality of contents have been encrypted, encrypting the grouped keys, creating the grouped encrypted keys, and outputting the grouped encrypted
5 keys in a recordable format to the recording medium, the grouped encrypted keys being output at the data output step.

12. An authoring apparatus, comprising:
10 a structure creating portion for creating a structure for recording a plurality of input contents on a recording medium;
15 grouped encrypted key creating means for grouping a plurality of keys, encrypting the grouped keys, and creating the grouped encrypted keys;
20 a data output portion for outputting the plurality of contents in a format recordable to the recording medium in accordance with the structure created by the structure creating portion, the grouped encrypted keys being output by the data output portion, and
25 encrypting means for encrypting the plurality of contents with different keys,
wherein the encrypting means is included in at least one of the structure creating portion and the data output portion, the grouped encrypted key creating means being configured to encrypt the plurality of keys with which the plurality of contents have been

encrypted and create the grouped encrypted keys.

13. An authoring method, comprising the steps of:
creating a structure for recording a

plurality of input contents on a recording medium;

5 grouping a plurality of keys, encrypting the
grouped keys, and creating the grouped encrypted keys;

outputting the plurality of contents in a
format recordable to the recording medium in accordance
with the structure created at the structure creating

10 step, the grouped encrypted keys being output at the
data output step, and

encrypting the plurality of contents with
different keys,

wherein the encrypting step is included in at
15 least one of the structure creating step and the data
output step, the grouped encrypted key creating step
being performed by encrypting the plurality of keys
with which the plurality of contents have been
encrypted and creating the grouped encrypted keys.

20 14. An authoring apparatus, comprising:

file creating means for creating a file in
which a content is stored;

management information creating means for
creating a management structure for managing the file
25 created by the file creating means;

data converting means for converting the file
into data in a predetermined format recordable to a

recording medium in accordance with the management structure created by the management structure creating means; and

5 encrypting means for encrypting the content,

wherein the file creating means, the

management structure creating means, the data

converting means, and the encrypting means are

structured as independently executable modules, and

wherein the encrypting means is configured to

10 encrypt output data of the file creating means and

output the encrypted data to the management structure

creating means or encrypt output data of the management

structure creating means and output the encrypted data

to the data changing means.

15 15. The authoring apparatus as set forth in claim

14,

wherein the file is composed of the content,

and management data with which the content is managed.

16. The authoring apparatus as set forth in claim

20 14,

wherein the file is capable of integrally

handing a plurality of types of data.

17. The authoring apparatus as set forth in claim

14,

25 wherein the recording medium having a

plurality of recording areas, and

wherein the authoring apparatus further

comprises:

recording means for recording the encrypted content and plain content to a first recording area of the recording medium and a second recording area thereof, respectively.

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18. The authoring apparatus as set forth in claim 17,

wherein the encrypted content recorded in the first recording area corresponds to the plain content recorded in the second recording area.

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19. The authoring apparatus as set forth in claim 14,

wherein an encrypting format of the encrypting means is represented by format information, the format information being embedded in the file after the format information has been encrypted.

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20. The authoring apparatus as set forth in claim 14, further comprising:

controlling means for executing instructions for the file creating means, the management structure creating means, the data converting means, and the encrypting means with an instruction file composed of a parameter and meaning data that represents meaning of the parameter.

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21. The authoring apparatus as set forth in claim 20,

wherein the instruction file is in an XML

format.

22. The authoring apparatus as set forth in claim
14,

5 wherein a software player for reproducing the
content is recorded on the recording medium.

23. An authoring method, comprising the steps of:
creating a file in which a content is stored;
creating a management structure for managing
the file created at the file creating step;

10 converting the file into data in a
predetermined format recordable to a recording medium
in accordance with the management structure created at
the management structure creating step; and
encrypting the content.

15 wherein the file creating step, the
management structure creating step, the data converting
step, and the encrypting step are structured as
independently executable modules, and

20 wherein the encrypting step is performed
between the file creating step and the management
structure creating step or between the management
structure creating step and the data converting step.

24. An authoring program for causing a computer
to execute an authoring method, comprising the steps
25 of:

creating a file in which a content is stored;
creating a management structure for managing

the file created at the file creating step;

 converting the file into data in a predetermined format recordable to a recording medium in accordance with the management structure created at

5 the management structure creating step; and

 encrypting the content,

 wherein the file creating step, the management structure creating step, the data converting step, and the encrypting step are structured as

10 independently executable modules, and

 wherein the encrypting step is performed between the file creating step and the management structure creating step or between the management structure creating step and the data converting step.

15 25. A recording medium on which an authoring program has been recorded, the authoring program being configured to cause a computer to execute an authoring method, comprising the steps of:

 creating a file in which a content is stored;

20 creating a management structure for managing the file created at the file creating step;

 converting the file into data in a predetermined format recordable to a recording medium in accordance with the management structure created at

25 the management structure creating step; and

 encrypting the content,

 wherein the file creating step, the

management structure creating step, the data converting step, and the encrypting step are structured as independently executable modules, and

5 wherein the encrypting step is performed between the file creating step and the management structure creating step or between the management structure creating step and the data converting step.

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